APPENDIX H
SOIL BORING LOGS

7	X		SOLUTIONS.	BORING LOCATION ID	:	BL-	-1		Page 2 of 2		
Project N	Name:		Shipyard Reassessment		t Pus	h Technol	ogy	_	L	atitude:	
Site Loc	cation:		Dean Court, Houma bonne Parish, Louisiana	Drilling Contractor: Driller's Name:				-	Lo	ongitude:	
Depth (ft) Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	l Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:	
8			see	page 1							
- <u> </u>			??? No	Recovery							
1 <u>0</u>				(Gley 1 3/N); soft; medium et; medium plasticity							
 11								 			
 1 <u>2</u>			stiffness; moist/wet; low	.5YR2.5/1); firm; medium plasticity; with 10% organic atter							
- —											
- — - —											
								_			
- —											

٧	Delta Shipyard Reassessme 200 Dean Court, Houma			BORING LOCATION	ON ID:		DSE-11	I/BL-6		Page 1 of 1		
Project	Name:			Drilling Method:	Direct	Pusl	n Technol	ogy		L	atitude:	
Site Lo	cation:		bonne Parish, Louisiana	Drilling Contractor: Driller's Name:						Lo	ngitude:	
		2040	6.012.019.0680.01	Drilling Rig: Total Depth:	8 ft							
Logg	ed By:		E. Hadwin	Completed Depth:								
Date(s)) Drilled: 8/9/2012			Borehole Diameter:	2 inch					Photos	: 1551 - 1557	
Rem	soil is stratified with organic m water estimated at appr Cutting D				o increa	se in			ınd			
Depth (ft) Sample Type	Interval Recovery	Clay; very dark grey (7.5 YR 3/1); firm; high stiffness;				Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:	
_ <u>0</u> -— -— - <u>—</u>				YR 3/1); firm; high stif y; with limestone rocks		NA	NA	NA		NA	NA	
 - <u>-</u>				r; very dark grey (10 YR 3/1); firm; high stiffness; moist; high plasticity								
			silt loam; black (gluey 1 2.5 strength; r	5/N); hard; moist; med non plasticity	lium dry				_			
 - - 3			clay loam; very dark gro medium stiffness; m	ey (gluey 1 3/N); soft/t noist; medium plasticit								
			organic matter; blac	k (gluey 1 2.5/N); mois	st				_			
 4 			silty clay loam; very da soft/soft; low stiffness; hydrocarbon									
5 6			uniformly-graded sandy lo 2.5/3) moist/wet; ; hyd	drocarbon contaminati	on				_			
 				ay loam; black (10 YR soft; heavy hydrocarb ion; trace shell								
- 7 -8		clay loam; dark grey (gluey 4/N); soft/firm; low/mediur stiffness; medium plasticity; moist		nedium				_				

<u>K</u>	<u> </u>	3	SOLUTIONS.	BORING LOCATION	ON ID:		BL-	-1		Pa	ge 1 of 2
Project Nam	-		Shipyard Reassessment Dean Court, Houma	Drilling Method: Drilling Contractor:	Direct	Pusl	n Technol	ogy	_	L	atitude:
Site Locatio	n: -	Terrel	bonne Parish, Louisiana 5.012.019.0680.01	Driller's Name: Drilling Rig:					_	Lo	ngitude:
Logged By	-	20400	E. Hadwin	Total Depth:	12 ft						
Date(s) Drille	-q. -		8/10/2012	Completed Depth: Borehole Diameter:	2 inch						
Remarks					ecover ease ir	ed ar soil	eas; groui			Photos	: 1583 - 1590
Depth (ft) Sample Type Interval	Recovery	Organic Vapor (ppm)	-	l Description		Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
_ <u>0</u> - <u>1</u>			loam; very dark grayish l stiffness; dry/moist; low			NA	NA	NA		NA	NA
 2			clay; dark gray (10YR4/ (2.5YR4/6); firm; medium/h plas						-		
 - - 3			clay loam; black (gluey 1 2 moist; medium plasticity; 2.4 to								
 4			silty loam; black (7.5YR moist/wet; low plasticity								
 6			??? No	recovery							
 7			silty clay loam; black (7 stiffness; moist/	.5YR2.5/1); firm; medi wet; low plasticity							
 			clay; dark greenish gra medium stiffness; m	y (Gley 1 10GY4/1); fii oist; medium plasticity							

7	X		SOLUTIONS.	BORING LOCATION ID	:	BL-	-1		Page 2 of 2		
Project N	Name:		Shipyard Reassessment		t Pus	h Technol	ogy	_	L	atitude:	
Site Loc	cation:		Dean Court, Houma bonne Parish, Louisiana	Drilling Contractor: Driller's Name:				-	Lo	ongitude:	
Depth (ft) Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	l Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:	
8			see	page 1							
- <u> </u>			??? No	Recovery							
1 <u>0</u>				(Gley 1 3/N); soft; medium et; medium plasticity							
 11								 			
 1 <u>2</u>			stiffness; moist/wet; low	.5YR2.5/1); firm; medium plasticity; with 10% organic atter							
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- — - —											
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	7		3	SOLUTIONS.	BORING LOCATION	ON ID:		BL	-2		Pa	ge 1 of 2
Pr	oject N	lame:		Shipyard Reassessment Dean Court, Houma	Drilling Method: Drilling Contractor:	Direct	Push	Techno	ogy		L	atitude:
	ite Loc		Terre	bonne Parish, Louisiana	Driller's Name:					_	Lo	ongitude:
	-		20406	6.012.019.0680.01	Drilling Rig: Total Depth:	12 ft						
	Logge	-		E. Hadwin	Completed Depth: Borehole Diameter:	2 inch						
Da	ate(s) [Orilled:		8/10/2012							Photos	: 1569 - 1575
	Rema	nrks:		soil is stratified with organic tinuations of previous cores water estimated at appr Cutting Di	; possible total depth	11 feet o increa	instea ise in s	d of 12 f	eet; gro			
Depth (ft)	Sample Type	Interval Recovery	Cuganic (md) Aparticular (md) Lithological Description Lithological Description					USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
2 3 5	Sa	Int Re	0 0	approximately 3" fine grain brown (5Y) silty loam; yellowish brown stiffness; dry/m clay loam; dark gray (10YF) moist; medical moist; medical moist; medical moist; more stiffness; dry/m clay; black (10YR2/1); find high properties of 50% organic moist; more stiffness; dry/mixture of 50% organic moist; soft/firm; low stiffness; No Recovery; possil	ium stiffness; dry/moist ned sand lens; dark re (R3/4); moist rown (10YR5/4); soft; loist; low plasticity R4/1); firm; medium stiffness; replasticity m; medium stiffness; replasticity matter and 50% loam; blastiffness; moist; non plastiffness; moist; mo	ow iffness; moist;	NA	NA NA	้ง NA		NA NA	NA NA
	og should	not be used	separately	silty clay loam that contain depth; transitions from (10YR3/2) to dark gray stiffness that increases wi medium plasticity; 0.5 orga 7 feet; approximately 0.5 the surfact	n very dark grayish bro (Gley 1 4/N); soft/firm; ith clay content; moist; anic matter lens betwe	wn ; low low to en 6.5				-		

	7		E	SOLUTIONS.	BORING LOCATION ID:		BL-	2		Pa	age 2 of 2
Pro	oject N	lame:	Delta	Shipyard Reassessment		Push	n Technolo	ogy		L	_atitude:
Si	te Loc	ation:		ean Court, Houma	Drilling Contractor:				_		
			Terre	bonne Parish, Louisiana	Driller's Name:	ı				L	ongitude:
Depth (ft)	Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	l Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
<u>8</u> 9 10				see descr	iption above						
1 <u>1</u>				medium stiffness; moist	brown (10YR3/2); soft/firm; ; low plasticity; 0.5 organic veen 10 - 10.5 feet						
- — — - — - —											

•	W	E	TEN SOLUTIONS.	BORING LOCATION	N ID:		BL-	3		Pa	ge 1 of 1
Project	Name:		Shipyard Reassessment Dean Court, Houma	 	Direct	Pusl	n Technolo	ogy		L	atitude:
Site Lo		Terre	bonne Parish, Louisiana	Drilling Contractor: Driller's Name:						Lo	ngitude:
-		20406	6.012.019.0680.01	Drilling Rig: Total Depth:	12 ft						
Logge	ed By:		E. Hadwin	Completed Depth:							
Date(s)	Drilled:		8/10/2012	-	2 inch				_		
Rem	arks:	no re to p	It is stratified with a 0.5 foot lens of black silty clay between 2.5 a recovery; the first area of no recovery is followed by a different so previous core and the second area of no recovery is followed be evious core with possible loss of material; ground water estimate fit due to increase in soil moisture Cutting Disposal: Return to sample location Lithological Description				soil type a by soil sim	s comp ilar to t	ared he	Photos	: 1591 - 1597
Depth (ft) Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	al Description		Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
				ss; dry/moist; high plast ; soft/firm; medium stiffr ow depth; medium plasti	ness;	NA .	NA	NA NA		NA NA	NA NA
 - <u>7</u> 			clay; gray (Gley 1 5/N); fir	noist/wet; low plasticity					_		
- <u>-</u>			silty clay loam; very dark medium stiffness; moi	gray (7.5YR3/1); soft/fi ist/wet; medium plasticit	irm; ty						

	7		E	SOLUTIONS	BORING LOCATION ID:		BL-	3		Pa	age 2 of 2
Pro	ject N	lame:	Delta	Shipyard Reassessment		Push	n Technolo	ogy		I	_atitude:
Sit	te Loc	ation:		Dean Court, Houma	Drilling Contractor:					1.	ongitudo:
			Terre	bonne Parish, Louisiana	Driller's Name:					L	ongitude:
Depth (ft)	Sample Type	Interval Recovery	Organic Vapor (ppm)		al Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
8				see descr	iption above						
 -9 10				??? No	Recovery						
11									_		
				silty clay loam; dark brow	n (7.5YR3/3); firm; medium						
				stiffness; moist;	medium plasticity						
12											
12									-		
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W	4	SOLUTIONS.	BORING LOCATION	ON ID:		BL-	4		Pa	ge 1 of 2
Project Name:		Shipyard Reassessment Dean Court, Houma	Drilling Method: Drilling Contractor:	Direct	Pusl	n Technolo	ogy		L	atitude:
Site Location:	Terre	bonne Parish, Louisiana 6.012.019.0680.01	Driller's Name:						Lo	ngitude:
Logged By:	1. 2040	E. Hadwin	Drilling Rig: Total Depth:	12 ft						
Date(s) Drilled		8/10/2012	Completed Depth: Borehole Diameter:	2 inch						
Remarks:	soil is	s stratified; 1 area of no reco ith poss ble loss of material increase in soil		ed at a e of red	pprox	kimately 5			Photos	s: 1558-1568
6 anymate (ft)	g@mic (ventro)	Lithologica	l Description		ial al	SCS Code	c Log	evel		
0	8, 3			iffness; high ed	the the	NÃ	N Televisian Property of the P	atev	Well Completion NA	installation Notes:
 -4 -5 		silty clay loam; brown (7.5\	ss; moist; low plasticity					_		
 		silty clay loam - clay cont very dark grey (7.5YR3 stiffness; moist/wet - mois medium	3/1); soft/firm; low/med	ium				-		

	W	E	SOLUTIONS.	BORING LOCATION ID:		BL-	4		Pa	age 2 of 2
Project	Name:		Shipyard Reassessment		Push	n Technolo	ogy		L	_atitude:
Site Lo	cation:		Dean Court, Houma	Drilling Contractor: Driller's Name:				_	1.	ongitude:
		rerre	bonne Parish, Louisiana	Driller's Name.					L	origitude.
Depth (ft) Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	al Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
8			see descr	iption above						
9			??? No	Recovery						
 10										
 11			stiffness moist/wet; med	y (10YR3/1); firm; medium lium plasticity; wood debris er portion of core						
- <u>-</u> - <u>-</u> - <u>-</u> 12										
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	7		4	SOLUTIONS	BORING LOCATION	ON ID:		BL-	5		Pa	ge 1 of 2
	-	lame:		Shipyard Reassessment Dean Court, Houma	Drilling Method: Drilling Contractor:	Direct	Pusl	h Technolo	ogy	_	L	atitude:
		ation:	Terre	bonne Parish, Louisiana 6.012.019.0680.01	Driller's Name:					_	Lo	ongitude:
	ogge		. 2040	E. Hadwin	Drilling Rig: Total Depth:	12 ft						
		Orilled:		8/10/2012	Completed Depth: Borehole Diameter:	2 inch						
Da	ic(s) i	Jillieu.		soil is partially stratified, bu	t mostly homogeneou	s: arour	nd wa	ater estima	ated at		Photos	: 1576 - 1582
1	Rema	rks:		approximately 4 ft due to inc		and pre	esenc			1		
Depth (ft)	Sample Type	Interval Recovery	Organic Vapor (ppm)	_	al Description	 	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0				silty clay loam; very dark b stiffness; moi	rown (10YR2/2) soft/fi st; low plasticity	rm; low	NA	NA	NA		NA	NA
- <u>1</u> 2				clay; very dark grey (7.5YF dry/moist; l	R3/1); firm; medium sti high plasticity	iffness;				_		
				silty clay loam lens; dark stiffness; moi	brown (7.5YR3/2); firm st; low plasticity	n; low						
				clay; dark to very dark g stiffness; moist/wet - mois medium/high plasticity; cor foot lens of a mixture of b loam that is moist; also b foot area of very dark	ture increase at lower re contains approxima lack organic matter an	depth; tely 0.5 nd clay a 0.5						

	7		E	SOLUTIONS	BORING LOCATION	ON ID:		BL-	5		Page 2 of 2		
Pro	ject N	lame:	Delta	Shipyard Reassessment	Drilling Method:	Direct	Push	n Technolo	ogy			Latitude:	
Sit	te Loc	ation:		Dean Court, Houma	Drilling Contractor: Driller's Name:					_	1	ongitude:	
			rerre	bonne Parish, Louisiana	Driller's Name.						L	Lorigitude.	
Depth (ft)	Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithologica	al Description		Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:	
8	Sa	Intr	O POL	see descr	iption above		An A	ži – i – i – i – i – i – i – i – i – i –	149	w	Completion	Notes:	
										—			

WESTERN.				BORING LOCATION ID:						Page 1 of 2		
Project N			Shipyard Reassessment Dean Court, Houma	Drilling Method: Drilling Contractor:	Direct	ct Push Technology				Latitude:		
Site Location: T		Terre	bonne Parish, Louisiana 5.012.019.0680.01	Driller's Name: Drilling Rig:						Longitude:		
Logged By:		20400	E. Hadwin	Total Depth: 12 ft Completed Depth: Borehole Diameter: 2 inch					_			
Date(s) Drilled:			8/7/2012						<u> </u>			
Rema		reco	very between 7 to 9 feet fol round water estimated at ap	on contamination within the 4 to 5 foot llowed by similar soil type with possible oppoximately 3.5 feet due to increase in sposal: Return to sample location			sible loss of material;			Photos: IMG 262 - 267		
Depth (ft) Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithological Description			Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:	
_ <u>0</u> - <u>1</u> 			loam; dark brown (7.5YF loose soil; low stiffness			NA	NA	NA		NA	NA	
			silty clay loam; very dark l (7.5YR2.5/1); soft; low/m moisture increase at lowe hydrocarbon contaminatio	edium stiffness; moist r depth; low plasticity;	/wet - visual							
 - - 7			transition area to clay loam medium stiffness; moi									
 8			??? No	Recovery					1			

Ź			SOLUTIONS									
		Delta Shipyard Reassessment 200 Dean Court, Houma		Drilling Method: Drilling Contractor:	Direct I	Push Technology						
		Terrebonne Parish, Louisiana		Driller's Name:							Page 2 of 2	_
Depth (ft) apple Type Sample Type preference interval		Organic Vapor (ppm)	Lithological Description			Analysis Interval USCS Code Graphic Log		Latitude: Well Installation Completion				
- <u>8</u> - <u>9</u>			??? No	Recovery								
 10			clay; dark gray (Gley 1 4/N); firm; high stiffness; moist/wet; high plasticity		ess;							
 11			clay loam; very dark gra	y (7.5YR3/1); firm; me	dium							
12			sunness, moist	medium plasticity								